

Exhibit B

Explanation about Effective Pressure-Receiving Area

FIG. 1 shows a case in which a sealing member is provided in an outer circumferential surface of a piston; FIG. 2 shows a case in which a rolling diaphragm is provided between the piston and a gap between cylinders; and FIG. 3 shows a case in which a diaphragm is provided between the piston and the gap between the cylinders. Hereinafter, explanation will be made of a change of an effective pressure-receiving area caused at a time of, for example, applying a certain pressure P to the piston (reciprocating body) from upper.

(1) As shown in FIG. 1, when the pressure P is applied to the piston, the cylinder moved downward as well as the sealing member is slid downward along an inner circumferential surface of the cylinder. For this reason, since the sealing member is not subjected to a force of the pressure P , a shape of the sealing member does not have any change. Accordingly, even if the piston is moved within a range of its stroke, an output of the piston to the outside remains unchanged.

(2) As shown in FIG. 2, the rolling diaphragm comprises a central portion covering the piston, a flange portion sandwiched between the cylinders, and a folded portion disposed between the central portion and the flange and having an inner/outer double structure. For this reason, when the pressure P is applied to the piston, the cylinder is moved downward as well as the folded portion smoothly rolls an inner circumferential surface of the cylinder and an outer circumferential surface of the piston according to downward movement of the cylinder. Therefore, the effective pressure-receiving area of the rolling diaphragm is kept constant. Accordingly, even if the piston is moved within a range of its stroke, an output of the piston to the outside remains unchanged.

(3) As shown in FIG. 3, the diaphragm comprises a central portion covering the piston, a flange portion sandwiched between the cylinders, and a curved portion disposed between the central portion and the flange portion. For this reason, when the pressure P is applied to the piston, the cylinder is moved downward as well as the curved portion is moved downward according to downward movement of the cylinder. That is, when the curved portion is moved downward, a center defined by a curvature of the curved portion is gradually moved downward. Therefore, when the curved portion is moved downward, an effective pressure-receiving area of the diaphragm is gradually made small. Accordingly, when the piston is moved within a range of its stroke, an output of the piston to the outside is changed.